THE EFFECT OF GAS FLARING ON CLIMATE CHANGE: HOW CULPABLE IS NIGERIA?

By

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ABSTRACT

Nigeria's oil wealth has been exploited for more than 45 years. But while oil companies including Shell, ExxonMobil have benefitted from the resource, local communities in the oil rich but conflict-riven areas live with the daily pollution caused by non-stop gas flaring- where the gas associated with oil extraction is burnt off into the atmosphere. More gas is flared in Nigeria than anywhere else in the world- in Western Europe, 99% of associated gas is used or re-injected into the ground. But in Nigeria, despite regulations introduced more than 20 years ago to outlaw the practice, most associated gas is still flared, causing local pollution and contributing to climate change.[1]

The aim of this project is to give a detailed analysis of the contributions of the practice of gas flaring, especially in Nigeria, to climate change. This would invariably lead to the examination of local legislations that have been enacted over the years to curb this menace- their effectiveness or otherwise. More importantly, the liability of Nigeria under various international instruments such as the UN Framework Convention on Climate Change, the Kyoto Protocol to the UN Framework Convention on Climate Change, African Charter on Human and Peoples' Rights and more recently, its commitments at the United Nations Climate Change Conference, held in Copenhagen, Denmark from the 7th-18th of December, 2009 shall be examined.

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[1] "Gas flaring in Nigeria" Media Briefing by *Friends of the Earth, www.foe.co.uk/resource/media_briefing/**gasflaring**innigeria.pdf* October 2004. Pg. 1

INTRODUCTION

Weather[2] changes all the time. The average pattern of weather, called climate, usually stays pretty much the same for centuries if it is left to itself. However, the earth is not being left alone. People are taking actions that can change the earth and its climate in significant ways.[3]

The single human activity that is most likely to have a large impact on the climate is the burning of fossil fuels which include gas. This is known as Gas Flaring.

WHAT IS GAS FLARING?

Flaring is a means of safely disposing of waste gases through the use of combustion. With an elevated flare, the combustion is carried out through the top of a pipe or stack where the burner and igniter are located.[4]

Associated Gases[5] are routinely flared in the course of producing and processing oil. This is a common practice in the oil production process. Hence, it is not necessarily an ecological or social crime to flare gas. However, the Nigerian case attracts more attention given the volume of gas flared since the beginning of commercial oil production in the country. For instance, when compared with oil production in the advanced countries, data collected by the Alberta Energy and Utilities Board (EUB) in Canada shows that in 1996, about 92 per cent of gases were conserved or used in some manner.[6] The remaining 8 per cent was flared. This socially responsible attitude towards gas conservation, as demanded partly by

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[2] Weather is not the same as Climate. ***Weather*** is the condition of the atmosphere at a particular place and time measured in terms of such things as wind, temperature, humidity, atmospheric pressure, cloudiness, and precipitation (rain, snow, etc.). In most places, weather can change from hour-to-hour, day-to-day, and season-to-season. However, ***Climate*** is the average pattern of weather in a place. For example, San Diego, California has a "Mediterranean climate" which means temperatures are generally moderate year round, there is limited rainfall, and humidity is typically low.

[3]" global warming and climate change." *http://www.gcrio.org/gwcc/part1.html*

[4]Chijoke Evoh "Gas Flares, Oil Companies and Politics in Nigeria". Guardian Newspaper, Monday, Feb 18, 2002.

[5] Traditionally, oil companies don't like to find gas together with their oil fields- associated gas (AG). They prefer to find gas without it being mixed up with oil- so called non-associated gas (non-AG). Finding AG means they have to find ways to dispose of it in order to profit from the oil, the lucrative driver. Whereas finding non-AG gives them the freedom to control their gas production without reference to oil production. So flaring of AG has traditionally been much more common generally.

[6] *www.nigerdeltastandard.com/news/index310.htm*

environmental requirements in Canada and other advanced countries, does not apply in Nigeria.

GAS FLARING IN NIGERIA

Nigeria is blessed with massive reserves of associated and non-associated gas, estimated in excess of 160 trillion cubic feet[7], making it the ninth largest concentration in the world. Due to unsustainable exploration practices coupled with the lack of gas utilization infrastructure in Nigeria, the country flares 75 per cent of the gas it produces and re-injects only 12 per cent to enhance oil recovery. It is estimated that about two billion standard cubic feet of gas is currently being flared in Nigeria, the highest in any member-nation of the Organisation of Petroleum Exporting Countries (OPEC). This is an enormous flare amount. Consequently, and going by the current statistics, Nigeria accounts for about 19 per cent of the total amount of gas flared globally.[8]

THE IMPACT OF GAS FLARING ON CLIMATE CHANGE

In its 2001 Third Assessment Report[9], the Intergovernmental Panel on Climate Change (IPCC)[10] said that the global average surface temperature increased by about 0.6°c over the 20th century, that it was 66-90% confident that most of the observed warming over the second half of the century was due to the increase in greenhouse gas concentrations, and projected that the temperature would increase from 1990-2100 by 1.4 to 5.8°c. It also stated that global mean sea level is projected to rise by 0.09 to 0.88 metres between 1990 and 2100, due primarily to thermal expansion and loss of mass from glaciers and ice caps.[11]

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[7] *http://www.nlng.com/NLNGnew/environment/NLNG+and+Gas+Reserves.htm*
[8] See Footnote 4
[9] *www.ipcc.ch*
[10] This scientific body was set up in 1988 by the UN and the World Meteorological Organisation to consider climate change.
[11] "Gas flaring in Nigeria: a human rights, environmental and economic monstrosity"
a report by the climate justice programme and environmental rights action/friends of the earth Nigeria, June 2005

According to the World Bank[12], by 2002, flaring in the country had contributed more greenhouse gases to the earth's atmosphere that all other sources in sub-Saharan Africa combined- and yet this gas is not being used as a fuel. As such, it is a serious but unnecessary contributor to climate change, the impacts of which are already being felt in the region with food insecurity, increased risk of disease and the rising costs of extreme weather damage. Local communities living around the gas flares- and many are close to villages and agricultural land- rely on wood for fuel and candles for light.

The flares also contain widely recognized toxins, such as benzene, which pollute the air. Local people complain of respiratory problems such as asthma and bronchitis. According to the US government, the flare contributes to acid rain[13] and villagers complain of the rain corroding their buildings. The particles from the flares fill the air, covering everything with a fine layer of soot.

Local people also complain about the roaring noise and the intense heat from the flare. They live and work alongside the flares with no protection.[14]

EFFECTIVENESS OF LOCAL LEGISLATIONS

It would be surprising to know that flaring has been in general and in principle prohibited under environmental regulations since 1st January 1984, unless a ministerial consent has been lawfully issued and conditions are complied with.[15] Thus, under the Associated Gas Reinjection Act 1979[16], consent can only be issued if the Minister is satisfied that utilization or reinjection is not appropriate or feasible in a particular field or fields. If consent is issued, the Minister is empowered to require the companies to pay a sum (reported in 2002 to be 10 Naira per million cubic feet (about 4 UK pence or 7 US cents).[17] This is a meager sum

[12] *www.en.afrik.com/article16622.html*
[13] The main impact that sour gas has on the environment comes in the form of acidic precipitation. The incineration of sour gas (hydrogen sulphide) produces sulphur oxides, which are released into the atmosphere. The end result of these compounds when they combine with other atmospheric components, namely oxygen and water, is what is called acid rain
[14] See Footnote 1 at pg. 2
[15] S.3(1) Associated Gas Reinjection Act 1979
[16] S.3(2)
[17] *http://priceofoil.org/thepriceofoil/human-rights/gas-flaring/*

compared to how much money it would cost these companies to stop flaring. So the companies continue to flare gas whilst paying this sum.

Protection of air quality and the atmosphere is provided for under the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act 2007. Thus, the Agency may make regulations setting specifications and standards to protect and enhance the quality of Nigeria's air resources, so as to promote the public health or welfare and the natural development and productive capacity of the nations' human, animal, marine or plant life.[18] Section 21 makes it an offence to conduct practices, processes and activities that affect the ozone and consequently endanger public health or welfare.

Section 9(1) (b) (iii) of Petroleum Act 1969 empowers the minister to make regulations for the prevention of pollution of watercourses and the atmosphere.

Regulation 36 Petroleum (Drilling and Production) Regulations enjoins the operator to carry out his operations in accordance with good oil field practices, and to take reasonable steps to control the flow and prevent the escape of waste out from relevant areas.

Also, Regulations 38 and 39 provide for the use of approved methods and practices for the production of oil and gas and for confirming petroleum respectively. These and similar regulations are not very stringent and are loosely worded. In addition, they contain only an unrealistic and unlikely penalty of revocation if they are contravened by an operator.

The above mentioned legislations only exist in theory as the proper machineries for their enforcement are lacking.

NIGERIA'S RESPONSIBILITIES UNDER SOME INTERNATIONAL INSTRUMENTS

Environmental issues are of international importance as invariably; negative effects of harmful practices cannot easily be limited and/or contained within national boundaries.[19] Therefore, there are several international conventions, declarations and resolutions that deal with such issues and impose obligations (mandatory or optional) on countries party to them. Some of them will be examined below:

[18] S.20(1)
[19]Yinka Omorogbe, "Oil and Gas Law in Nigeria", 2001, Malthouse Law Books. Pg.129

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE (UNFCCC)

The **United Nations Framework Convention on Climate Change** (**UNFCCC** or **FCCC**) is an international environmental treaty produced at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro from 3 to 14 June 1992. The objective of the treaty is to stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.[20]

The UNFCCC was opened for signature on May 9, 1992, after an Intergovernmental Negotiating Committee produced the text of the Framework Convention as a report following its meeting in New York from 30 April to 9 May 1992. It entered into force on March 21, 1994. As of December 2009, UNFCCC had 192 parties.

Nigeria signed the convention on 13th of June, 1992, ratified it on 29th of August, 1994 and entered it into force on 27th of November, 1994.

It is important to state here that the treaty itself sets no mandatory limits on greenhouse gas emissions for individual countries and contains no enforcement mechanisms. In that sense, the treaty is considered legally non-binding. Instead, the treaty provides for updates (called "protocols") that would set mandatory emission limits. The principal update is the Kyoto Protocol, which has become much better known than the UNFCCC itself.

One of its first tasks however was to establish **national greenhouse gas inventories** of greenhouse gas (GHG) emissions and removals, which were used to create the 1990 benchmark levels for accession of Annex I countries to the Kyoto Protocol and for the commitment of those countries to GHG reductions. Updated inventories must be regularly submitted by Annex I countries.[21]

[20] "Article 2" *The United Nations Framework Convention on Climate Change.*
[21] *http://en.wikipedia.org/wiki/United_Nations_Framework_Convention_on_Climate_Change*

KYOTO PROTOCOL

The Kyoto Protocol[22] is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions (Annex I Countries) .These amount to an average of five per cent against 1990 levels over the five-year period 2008-2012.

The major distinction between the Protocol and the Convention is that while the Convention **encouraged** industrialised countries to stabilize GHG emissions, the Protocol **commits** them to do so.

Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities." [23]

This treaty does not set binding targets for developing countries.[24] However, even without responsibility under the Kyoto target, developing countries are also committed to share the common responsibility of all countries to reduce emissions.

THE COPENHAGEN ACCORD

This agreement was adopted at the UN Climate Change Conference which held between 7th and 18th of December, 2009 in Copenhagen, Demark. The five-page document manifested the strong determination by countries, rich or poor, to save our warming planet, embodied broad consensus of the international community on further efforts to cut greenhouse gas emissions, and marked a new starting point for negotiations on fighting global warming. It

[22] The Protocol was initially adopted on 11 December 1997 in Kyoto, Japan and entered into force on 16 February 2005. As of November 2009, 187 states have signed and ratified the protocol.
[23] *http://unfccc.int/kyoto_protocol/items/2830.php*
[24] Nigeria is listed as a developing country under the protocol

should be noted that the Copenhagen Accord is simply a political agreement rather than a legally-binding one.

Though Nigeria was present at the summit, it has however failed to sign the Copenhagen Accord upon the expiration of the deadline of 31th January, 2010 agreed upon by the countries present at the meeting.

It is interesting to however note that at the first press conference after the Copenhagen meeting on January 20, 2010, Yvo de Boer, Executive Secretary of the UNFCCC said that the deadline is a "soft" one, as countries who "fail to meet it can still associate with the accord afterwards"

CONCLUSION

At this point, there is no gainsaying the seriousness of the dangers posed by the practice of gas flaring to the environment, nationally and internationally. This phenomenon has both short term and long term negative effects on the global climate.

It is suggested that the National Assembly enact specific and more effective laws to tackle this issue. A law that it more effective in its breach than in its observance is a dead-letter law. In this vein, the Bill for the Amendment of the Associated Gas Re-injection Act before the National Assembly should be given priority in its swift passage and enforcement.

Furthermore, the practice of gas flaring is a violation of various human rights such as right to a clean environment, right to life etc. and as such, individuals, groups and other countries can enforce these rights against Nigeria and the various multinational oil companies operating therefrom.[25]

In conclusion, it is the duty of all countries of the world to ensure that the effect of climate change is reduced to its barest minimum through engaging in practices that will contribute to the preservation rather than degradation of planet earth.

[25] Articles 2, 4, 14, 16, 21, 24 of African Charter on Human and Peoples' Rights